TechLaw
Quality & Integrity

May 27, 2007

**MEMORANDUM**

SUBJECT: Review of Analytical Data
TO: Carl Brickner
Environmental Scientist
USEPA Region 9 Quality Assurance Office (PMD-3)
75 Hawthorne Street
San Francisco, CA 94105-3901

FROM: Jana Dawson
TechLaw, Inc.
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Chantilly, VA 20151-1101

Attached are comments resulting from review of the following analytical data:

| | |
|---|---|
| SITE: | Omega Chemical |
| CERCLIS ID NO.: | Not Available |
| CASE NO.: | R06S72 |
| SDG NO(S).: | 06255C |
| SAMPLE NO.: | 3 Air Samples and 1 Air Blank Sample |
| COLLECTION DATE(S): | September 8, 2006 |
| LABORATORY: | USEPA Region 9 Laboratory, Richmond CA |
| ANALYSES: | Volatile Organic Compound Analysis in Air and Soil Vapor by Region 9 Laboratory Standard Operating Procedure(s) 311 Rev. 0, 312 Rev. 3 and USEPA Method TO15 |
| REVIEWER(S): | Kimberly M. Gould<br>Staff Consultant<br>TechLaw, Inc. |

If there are any questions, please contact Kimberly M. Gould via telephone at 304-830-1436 or via e-mail at kgould@techlawinc.com.
Attachment(s)

| | | | |
|---|---|---|---|
| USEPA Project Officer Attention: | Rejected Data: | [ ] Yes | [X] No |
| | Estimated Data: | [X] Yes | [ ] No |
| | Sampling Issues: | [ ] Yes | [X] No |

**DATA VALIDATION REPORT**

| | |
|---|---|
| SITE: | Omega Chemical |
| CERCLIS ID NO.: | Not Available |
| CASE NO.: | R06S72 |
| SDG NO(S).: | 06255C |
| LABORATORY: | USEPA Region 9 Laboratory, Richmond CA |
| REVIEWER(S): | Kimberly M. Gould<br>Staff Consultant<br>TechLaw, Inc. |
| DATE: | May 27, 2007 |

I. Case Summary

Sample Information:

| | |
|---|---|
| Sample Numbers: | OC1-EB1-G-3-66, OC1-BSO-G-0-67, OC1-BAA-G-0-68, and OC1-MNB-G-0-69 |
| Concentration and Matrix: | Air |
| Analysis: | Volatile Organic Compound Analysis |
| SOW/SOP: | Volatile Organic Compound Analysis in Air and Soil Vapor by USEPA Region 9 Laboratory Standard Operating Procedure(s) 311, Rev. 0, 312 Rev. 3<br><br>Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air -- Second Edition (EPA/625/R-96/010b, January 1999) |
| Collection Dates: | September 8, 2006 |
| Sample Receipt Dates: | September 12, 2006 |
| Analysis Dates: | September 15, 2006 and September 16, 2006 |

Field QC Samples:

| | |
|---|---|
| Field Blank (FB): | None |
| Equipment Blank (EB1): | OC1-EB1-G-3-66 |
| Equipment Blank (EB2): | None |
| Equipment Blank (EB3): | None |
| Background Sample (BG): | None |
| Field Duplicate Pair (D1): | None |
| Field Duplicate Pair (D2): | None |
| Field Duplicate Pair (D3): | None |

Method Blanks and Associated Samples:

B6I0075-BLK1 (9/15/06): OC1-EB1-G-3-66, OC1-BSO-G-0-67, OC1-BAA-G-0-68, and OC1-MNB-G-0-69

Tables:

1A: Analytical Results with Qualifications
1B: Data Qualifier Definitions

USEPA Project Officer Attention:

Rejected Data: No results were rejected in this SDG.
Estimated Data: Trans-1,3-dichloropropene and Freon results were qualified as estimated (UJ) in this SDG.
Sampling Issues: No sampling issues were associated with this SDG.

Additional Comments:
This data validation report was prepared in accordance with laboratory SOPs and by adhering to guidance provided in the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (CLP NFGs) (EPA-540/R-99-008, October 1999).

The following method was also referenced:
Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air -- Second Edition (EPA/625/R-96/010b, January 1999)

## II. Validation Summary

| | Acceptable | Comment |
|---|---|---|
| Holding Times and Sample Preservation | Yes | |
| GC/MS Performance | Yes | |
| Calibration(s) | No | A |
| System Performance | Yes | |
| Laboratory Blank(s) | Yes | |
| Laboratory Control Sample(s) | No | B, C |
| Duplicate Sample(s) | Yes | |
| Compound Identification | Yes | D |
| Compound Quantitation | Yes | |
| Field QC | Yes | |

III. Validity and Comments

A) The second source calibration verification (SCV) percent difference (%D) result for trans-1,3-dichloropropene (-67 %D) was outside of the SOP QC limits of 30 %D. All sample results are estimated (UJ) for low LCS recovery, therefore no additional is required.

B) The laboratory did not use the laboratory control sample (LCS) quality control (QC) limits of 57.5 - 134 %R (percent recovery) for bromomethane set forth in the applicable SOP, but utilized the QC limits of 57.8 - 134 %R when determining if recoveries were acceptable. All applicable LCS %R results were acceptable when compared to either set of QC limits.

C) Laboratory control sample %R results for trichlorofluoromethane (138 %R; QC limits 61.4 – 132 %R), freon-113 (136 %R; QC limits 59.7 – 132 %R), trans-1,3-dichloropropene (43 %R; QC limits 44.5 – 159 %R) and 1,3-dichlorobenzene (134 %R; QC limits 58.4 – 130 %R) were outside of the referenced SOP QC limits. Compounds exhibiting %R above the higher range of the QC limits were not reported in three of the client samples and required no further action. Freon-113 was reported in sample OC1-BSO-G-0-67 and was qualified as estimated (J). The result for trans-1,3-dichloropropene was below the lower range of the QC limits and the compound was not reported in any of the client samples. The non-detected results for trans1,3-dichloropropene are qualified (UJ) in all samples. Sample qualifications are listed as follows:

- Freon 113 is estimated (J) in sample OC1-BSO-G-0-67
- trans-1,3-dichloropropene is estimated (UJ) in all samples.

D) Acetone was reported as a tentatively identified compound (TIC) with an estimated concentration of 110 ppbv in sample OC1-MNB-G-069 and has been qualified as estimated as a tentative identification (NJ) by the data reviewer.

Case Number: SDG 06255C TABLE 1A - ANALYTICAL RESULTS WITH
Site: Omega Chemical OU1 QUALIFICATIONS
Laboratory: USEPA Region IX Laboratory, Richmond CA
Reviewer: Kimberly Gould
Date: 27-May-07
Units: ppbv

Qualifiers: U indicates that the analyte was analyzed for but not detected above the reported sample quantitation limit
J indicates that the reported value is estimated R indicates that the reported value is rejected
NJ indicates that the reported value is estimated and a tentatively identified compound

| Station Location | Equipment Blank | | OC1-BSO-G-0-67 | | OC1-BAA-G-0-68 | | OC1-MNB-G-0-69 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID | OC1-EB1-G-3-66 | | OC1-BSO-G-0-67 | | OC1-BAA-G-0-68 | | OC1-MNB-G-0-69 | | |
| Lab Sample ID | 0609032-01 | | 0609032-02 | | 0609032-03 | | 0609032-04 | | |
| Date of Collection | 09/08/06 | | 09/08/06 | | 09/08/06 | | 09/08/06 | | |
| Dilution Factor | 4.98 | | 2.65 | | 3.23 | | 2.72 | | |
| Analyte | Result | Q | Result | Q | Result | Q | Result | Q | |
| Dichlorodifluoromethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,2-Dichlorotetrafluoroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Chloromethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Vinyl chloride | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Bromomethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Chloroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Trichlorofluoromethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Dichloromethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,1-Dichloroethene | 5 | U | 4.4 | | 3.2 | U | 2.7 | U | |
| Methylene chloride | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,1-Dichloroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| cis-1,2-Dichloroethene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Chloroform | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,1,1-Trichloroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Benzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,2-Dichloroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Carbon tetrachloride | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Trichloroethene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,2-Dichloropropane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| cis-1,3-Dichloropropene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| trans-1,3-Dichloropropene | 5 | UJ | 2.6 | UJ | 3.2 | UJ | 2.7 | UJ | |
| 1,1,2-Trichloroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Toluene | 5 | U | 2.7 | | 4.7 | | 2.7 | U | |
| Tetrachloroethene | 5 | U | 5.4 | | 3.2 | U | 2.7 | U | |
| Freon-113 | 5 | U | 1.7 | J | 3.2 | U | 2.7 | U | |
| 1,2-Dibromoethane (EDB) | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Chlorobenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Ethylbenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| m & p-Xylene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| o-Xylene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Styrene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Hexachlorobutadiene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,1,2,2-Tetrachloroethane | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,3,5-Trimethylbenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,2,4-Trimethylbenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,3-Dichlorobenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,4-Dichlorobenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,2-Dichlorobenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| 1,2,4-Trichlorobenzene | 5 | U | 2.6 | U | 3.2 | U | 2.7 | U | |
| Acetone (Tentative Identification) | Not Reported | | Not Reported | | Not Reported | | 110 | NJ | |

QL - Laboratory Quantitation Limit.

Table 1B. Data Qualifier Definitions

The following data qualifier definitions are based upon the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review" (CLP NFGs) (EPA-540/R-99-008, October 1999) and have been modified to comply with EPA Region IX requirements.

| | |
|---|---|
| No qualifiers | Indicate the data are acceptable both qualitatively and quantitatively. |
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| L | Indicates results which fall below the Laboratory Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in analytical precision near the limits of detection. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |